

REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested. Upon entry of this amendment, claims 1 and 7 are amended, leaving claims 1-3 and 5-20 pending with claims 1 and 7 being independent. No new matter has been added.

Support for the amendments can be found at least on pg. 1, lines 10-12, pg. 9, lines 4 and 5, pg. 9, line 15, pg. 11, line 19, and pg. 12 lines 8-11 of the original specification of the present application.

Objection to the Specification

The specification has been objected to for failing to provide proper antecedent basis for the recitation “an edge does not result from grinding between the guide face and the outer circumferential surface of the shaft of the shaft member” in claim 1.

Applicants respectfully request that this objection be withdrawn, since this phrase has been deleted from the claims.

Rejections Under 35 U.S.C. §112, second paragraph

Claims 1-6 and 8-20 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner states that the element that an edge which does not result from grinding is confusing because it is unclear if the edge is part of the final product of the claimed invention.

Applicants respectfully request that this rejection be withdrawn, since this phrase has been deleted from the claims.

Rejections Under 35 U.S.C. §103(a)

Claims 1-6 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Takehana et al. (U.S. 6,851,859) in view of GB 2197427.

Applicants submit that the claims as now pending are allowable over the cited prior art. Specifically, amended independent claim 1 recites a hydrodynamic bearing device for a spindle motor of a disk drive device for information equipment, the hydrodynamic bearing device

comprising a shaft member having a tapered guide face serving as a guide when another member for holding a disk is press fitted into the shaft member, a blunting portion formed between the guide face and the outer circumferential surface of the shaft member adjacent to the guide face, the blunting portion being a curved surface that is smoothly continuous to the guide face and the outer circumferential surface of the shaft member, the guide face, the outer circumferential surface of the shaft member adjacent to the guide face, and the blunting portion forming a coaxially-grinded surface.

The recited structure enables a more accurate press fitting of another member (e.g., a rotating member) to the shaft member. This improved accuracy enables the present invention to reduce or eliminate inclination of the another member, thus, allowing improved accuracy of the motor and cost reduction thereof.

The cited prior art fails to disclose or render obvious such a device. In particular, the Examiner recognizes that Takehana fails to disclose the blunting portion recited in independent claim 1. For this element, the Examiner relies on GB 2197427, stating that GB 2197427 discloses a blunting portion 18 formed between a guide surface and the outer circumferential surface of a shaft. *See* the June 23, 2010 Office Action, pg. 3.

Applicants submit that GB 2197427 merely states that the curved surface 18 is formed at a free end of the shaft 11. Thus, GB 2197427 clearly does not disclose 1) that the blunting portion is a curved surface that is smoothly continuous to the guide face and the outer circumferential surface of the shaft member; and 2) that the outer circumferential surface of the shaft member, the guide face, the outer circumferential surface of the shaft member adjacent to the guide face, and the blunting portion form a coaxially-grinded surface. At best, GB 2197427 discloses curved surface 18; however, there is no disclosure in GB 2197427 that this surface is smoothly continuous, as required by the blunting portion of independent claim 1 of the present application. Additionally, there is no disclosure that curved surface 18, along with the alleged guide surface and the outer circumferential surface, form a coaxially-grinded surface, as required by the blunting portion of independent claim 1 of the present application. The curved surface 18 is merely an arc chamfered portion at the top end of the shaft 11, and a corner portion would likely result between the arc chamfered portion and outer circumferential surface.

Moreover, there is no reasoning in the prior art to modify GB 2197427 such that it would have rendered independent claim 1 obvious. Applicants submit that one of ordinary skill in the

art would not have combined these references to arrive the present invention. That is, GB 2197427 is directed to a bearing assembly for gears and pulleys. In such a device it is not necessary to enable a more accurate press fitting of another member (e.g., a rotating member) to the shaft member, since there is no need to reduce or eliminate inclination of the another member. Therefore, Applicants submit that independent claim 1 and its dependent claims are allowable over the cited prior art.

Applicants submit that independent claim 7 and its dependent claims are allowable for similar reasons. Namely, the cited prior art fails to disclose or render obvious a method for manufacturing a hydrodynamic bearing device comprising simultaneously grinding a guide face, an outer circumferential surface of the shaft member that is adjacent to the guide face, and a boundary portion between the guide face and the outer circumferential surface of the shaft member adjacent to the guide face so that a blunting portion is formed at the boundary portion in the shape of a curved surface that is smoothly continuous to the guide face and to the outer circumferential surface, wherein the guide face, the outer circumferential surface of the shaft member adjacent to the guide face, and the blunting portion form a coaxially-grinded surface, as recited by independent claim 7.

Conclusion

In view of the foregoing amendments and remarks, all of the claims now pending in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

Should the Examiner believe there are any remaining issues that must be resolved before this application can be allowed, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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/Jeffrey J. Howell/

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